

IN THE SPECIFICATION:

Please amend paragraph number [0009] as follows:

[0009] Plasma sensors have been developed with the intent of simulating a ~~plasma-processed~~ plasma-processed wafer when subjected to a plasma. This type of plasma sensor includes the so-called "CHARM®" sensor disclosed in Lukasek, et al., "CHARM®, a New Wafer Surface Charge Monitor," Tech Con '90, San Jose (hereinafter "Lukasek 1"), and the "CHARM-2" sensor disclosed in U.S. Patent 5,315,145, issued to Lukasek on May 24, 1994 (hereinafter "Lukasek 2"). These sensors store data representative of the charge generated by a plasma at various locations thereof, which data may be evaluated only after the plasma processes have been conducted.

Please amend paragraph number [0037] as follows:

[0037] Plasma probe 10 is used to evaluate one or more properties of a plasma to which a processed substrate has been, is being, or will be exposed and possibly the effects of the plasma on the processed substrate. The use of a probe substrate 12 that is formed from the same material as the processed substrate and that has substantially the same dimensions as the processed substrate may closely approximate the conditions that are present in a plasma when a processed substrate, rather than probe substrate 12, is present in the plasma. By way of example only, when plasma probe 10 is to be used to evaluate plasmas that are used in semiconductor device fabrication processes, probe substrate 12 may comprise a full or partial wafer of silicon, gallium arsenide, indium phosphide, or other semiconductor material, as well as a ~~silicon-on-insulator~~ silicon-on-insulator (SOI) type substrate, such as a silicon-on-glass (SOG), silicon-on-ceramic (SOC), or silicon-on-sapphire (SOS) type substrate. Of course, when plasma probes incorporating teachings of the present invention are used to evaluate a plasma that is used for different purposes, the probe substrates thereof may be formed from a material that is more suited to the particular application for the evaluated plasma.

Please amend paragraph number [0053] as follows:

[0053] Turning now to FIG. 5, another embodiment of plasma probe 10''' that incorporates teachings of the present invention is shown. Plasma probe 10''' includes a probe substrate 12 with an active surface 13 and a first dielectric layer 14 covering at least portions of active surface 13. A bottom electrode layer 16', which includes an array of bottom electrodes 17' and their corresponding conductive traces 18', is positioned over first dielectric layer 14, which electrically isolates bottom electrodes 17' and conductive traces 18' from the material of probe substrate 12. One or more second dielectric layers ~~20a''', 20b''', 20c''', etc.~~ (collectively second dielectric layers 20''') 20''' overlie bottom electrode layer 16'. Each bottom electrode 17' is at least partially exposed through an aperture 21 formed through second dielectric layer(s) 20'''

Please amend paragraph number [0054] as follows:

[0054] Plasma probe 10''' also includes upper electrode layers 24a''', 24b''', 24c''', etc. (collectively upper electrode layers 24''') that are located at different elevations above active surface 13 of probe substrate 12. Upper electrode layers 24''' may be carried internally by a single second dielectric layer 20''' or positioned between adjacent second dielectric layers 20'''. If plasma probe 10''' includes multiple second dielectric layers 20''', each second dielectric layer 20''' electrically isolates upper electrode layers 24''' from one another, as well as from bottom electrode layer 16'. Second dielectric layers 20''' may also electrically isolate each upper electrode ~~25a''', 25b''', 25c''', etc. (collectively upper electrodes 25''')~~ 25''' and conductive trace 23''' of each upper electrode layer 24''' from one another. The height or elevation of each upper electrode layer 24''' over active surface 13 of probe substrate 12 is determined by the collective thicknesses of the underlying first dielectric layer 14, bottom electrode layer 16', and second dielectric layer(s) 20'''. In addition, if upper electrode layers 24''' are not fully recessed within one or both of the second dielectric layers 20''' adjacent thereto, the thicknesses of any upper electrode layer(s) 24''' that underlie a particular upper electrode layer 24''' may contribute to the height or elevation of that upper electrode layer 24'''.

Please amend paragraph number [0055] as follows:

[0055] As depicted, corresponding upper electrodes ~~25a''', 25b''', 25c''', etc., 25'''~~ of different upper electrode layers 24a''', 24b''', 24c''', etc., respectively, may be positioned at substantially the same lateral location of plasma probe 10'''. Each upper electrode 25''' may comprise an end portion of a conductive trace 23''', as depicted, that is exposed to an aperture 21 through which a corresponding bottom electrode 17' is exposed. Thus, each bottom electrode 17' and its corresponding upper electrodes ~~25a''', 25b''', 25c''', etc., 25'''~~ are exposed to a plasma by way of the same aperture 21.

Please amend paragraph number [0056] as follows:

[0056] As each upper electrode ~~25a''', 25b''', 25c''', etc., 25'''~~ communicates with a different meter 30, one or more properties of a plasma at a particular lateral location over plasma probe 10''' may be evaluated at each of the different elevations of upper electrodes ~~25a''', 25b''', 25c''', etc., 25'''~~ and a corresponding bottom electrode 17' within a single aperture 21 at that lateral location.

Please amend paragraph number [0075] as follows:

[0075] In FIG. 19, sacrificial substrate 40 is removed from the assembly, exposing upper electrodes 25 and dielectric material of regions of layer 20 that are laterally adjacent to upper electrodes 25. By way of example, sacrificial substrate 40 may be exposed to a solvent or an etchant that will remove the material thereof. Such an etchant may have selectivity for the material of sacrificial substrate 40 (*e.g.*, nylon, polystyrene, etc.) over the materials of underlying structures, such as upper electrodes 25 and dielectric layer 20. Alternatively, a more nonselective etchant may be removed once upper electrodes 25 are exposed therethrough. As an alternative to the use of etchants, known planarization processes (*e.g.*, mechanical planarization or ~~chemical-mechanical~~ chemical-mechanical planarization processes) may be used to expose upper electrodes 25 through sacrificial substrate 40. As yet another alternative, sacrificial substrate 40 may be removed by thermal degradation.